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| EXAMINER | |
|---|---|
| NGUYEN, SON T | |
| ART UNIT | PAPER NUMBER |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/549,941 | JOHNSEN, TORFINN | |
| | Examiner | Art Unit | |
| | Son T. Nguyen | 3643 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *29 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-12,14,15,18,20,22,24,26,28,30,32 and 57* is/are pending in the application.

4a) Of the above claim(s) *57* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12,14,15,18,20,22,24,26,28,30 and 32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/23/06,9/6/06,6/28/07,5/28/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-12,14,15,18,20,22,24,26,28,30,32 drawn to a mixture for treating a soil surface.

Group II, claim(s) 57, drawn to a method for altering the albedo of a soil surface.

2. The inventions listed as Groups I & II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features (STF) for the following reasons: group I lacks the STF of dissolving the mixture in water and applying the water mixture over the soil surface. There is no indication that group I includes water therein because it could be a dry substrate.

3. During a telephone conversation with Dennis Daley on 9/17/08 a provisional election was made with traverse to prosecute the invention of group I, claims 1-12,14,15,18,20,22,24,26,28,30,32. Affirmation of this election must be made by applicant in replying to this Office action. Claim 57 has been withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### *Claim Rejections - 35 USC § 112*

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claims 1-12,14,15,18,20,22,24,26,28,30,32** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. For example, phrases such as "preferably", "such as", "and/or" render the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). In addition, in claim 1, the phrase "a film or membrane forming thickening agent" is unclear because if the thickening agent is mixed with other ingredients in the mixture, then it is still a film or membrane? Also, in claim 1, the phrase "the basic mixture" is unclear because is this mixture the same as the previous mixture claimed with the raw material, the thickening agent and the pigment or is this basic mixture another mixture added. In claim 4, the phrase "a growth medium for microalgae" is unclear because is this medium another material in addition to the mixture or it is the mixture itself. In claim 9, the phrase "the vegetable debris" lacks prior antecedent basis. In claim 11, the phrase "that that the xanthan" is unclear. In claim 12, the whole claim is unclear and indefinite. In claim 14, the phrase "$TiO_2$" should be spelled out for which chemical it stands for. In claims 14 & 15, it is unclear by the phrase "when it is desired" because if the user does not desired, then the claim is irrelevant/mooted? Note, these are only some examples for Applicant's review. Applicant is encourage to review the claims and rewrite all claims properly to U.S. practice.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 1,7,8,18** are rejected under 35 U.S.C. 102(b) as being anticipated by Morgan (6029395 on form PTO-1449).

For claim 1, Morgan teaches a mixture for treating a soil surface and/or a soil mass, comprising a mixture spread over the soil serrate and/or arranged in the soil mass to be treated in such manner that a layer in the form of a film or membrane on the surface and/or some distance down in the soil to be treated is formed (col. 1,lines 34-37,57-65,col. 5,lines 20-67), the mixture including a basic powder mixture of a water-soluble, dried and ground organic raw material (col. 2,lines 52-65,col. 3,lines 1-20), a film or membrane forming thickening agent (col.3,lines 40-67) and pigment (col. 5,lines 1-10); and the basic mixture including at least one component which has a sufficient antioxidizing effect to ensure that the membrane has an anfioxidizing effect on the surroundings (col. 5,lines 1-19).

For claim 7, Morgan teaches wherein the organic material is any material originating from the natural environment, the animal or plant kingdom, and that, in a dried and ground state, it contains fibres and adhesive compounds so that the material will function as a binder in the resulting film or membrane (col. 2,lines 52-65,col. 3,lines 10-25,40-67).

For claim 8, Morgan teaches wherein the raw organic material comprises substantially natural, industrial and/or household organic or biological waste (col. 2,lines 55-65,col. 3,lines 10-25).

For claim 18, Morgan teaches wherein the basic mixture has added thereto one or more of the following additives: binders (col. 3,lines 40-67), preservatives, fertilizers (col. 3,lines 29-39), water stabilizers, mineral salts, pH regulators (col. 3,lines 35-39), antioxidants (col. 5,lines 9-11) and/or electrically conductive substances.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. **Claims 2,3,26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan as applied to claims 1,18 above, and further in view of Mankiewicz (6946496).

Morgan is silent about wherein the powder mixture is saturated with electrons to at least electrical neutrality; wherein the powder mixture is oversaturated with electrons and has an excess of negative electric charges; wherein the electrically conductive additives comprise one or more substances selected from the group consisting of readily soluble mineral salts, ash and/or carbon fibres, and that the electrically conductive substances are added in an amount of from 0.1 to 15, preferably 0.1 to 5 parts by weight of dry powder.

Mankiewicz teaches in the same field of endeavor of soil mixture as Morgan in which Mankiewicz employs electrons in his mixture for affecting the solubilities and availabilities of minerals at varying oxidation and reduction states, and for facilitating anaerobic processes modifying mineral availability as well as pollutant removal capacity, wherein the powder mixture is oversaturated with electrons and has an excess of negative electric charges (col. 7,lines 40-60). It would have been obvious to one having ordinary skill in the art at the time the invention was made to saturate or oversaturate the mixture of Morgan with electrons to at least electrical neutrality or in excess of negative electric charges as taught by Mankiewicz in order to affect the solubilities and availabilities of minerals at varying oxidation and reduction states, and to facilitate anaerobic processes modifying mineral availability as well as pollutant removal capacity.

However, Morgan as modified by Mankiewicz is silent about the electrically conductive substances are added in an amount of from 0.1 to 15, preferably 0.1 to 5 parts by weight of dry powder. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the electrically conductive substances of Morgan as modified by Mankiewicz be added in an amount of from 0.1 to 15, preferably 0.1 to 5 parts by weight of dry powder, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

10. **Claims 4,6** are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan as applied to claim 1 above, and further in view of Wake et al. (JP402195830).

Morgan is silent about wherein the basic mixture includes a growth medium for microalgae, and wherein the basic mixture contains from 0.t to 10 parts by weight of microalgae.

Wake et al. teach in the same field of endeavor of soil mixture as Morgan in which Wake et al. employs microalgae in their mixture to promote germination (see Abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ microalgae as taught by Wake et al. in the mixture of Morgan in order to promote germination.

Morgan as modified by Wake et al. is silent about wherein the basic mixture contains from 0.t to 10 parts by weight of microalgae. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the basic mixture of Morgan as modified by Wake et al. containing from 0.t to 10 parts by weight of microalgae, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

11. **Claims 5,14,15,20,22,24,28,30,32** are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan (as above).

For claim 5, Morgan teaches a wide range of formulations with various ingredients in the mixture can be combined with different concentration (col. 4,lines 1-39). However, Morgan does not specifically states wherein the basic mixture comprises from 1 to 50 parts by weight of organic raw material, 0.1 to 60 parts by weight of thickening agent and from 2-50 parts by weight of pigment. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the

basic mixture of Morgan comprises from 1 to 50 parts by weight of organic raw material, 0.1 to 60 parts by weight of thickening agent and from 2-50 parts by weight of pigment, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

For claim 14, Morgan teaches wherein when it is desired to form a film or membrane having a high degree of reflection, one or more of the following materials in dry powder form are used as pigments: stone, lime, sand, clay, chalk, shells, white mineral pigments such as TiO2, white plant dyes and/or white plant fibres such as cotton, bog cotton or algae-based components having light characteristics (col. 3,lines 10-20,col. 5,lines 5-9). However, Morgan is silent about the pigments are added in an amount of from 0:1 to 25 parts by weight, preferably from 1 to 10 parts by weight. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the pigments of Morgan being added in an amount of from 0:1 to 25 parts by weight, preferably from 1 to 10 parts by weight, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

For claim 15, Morgan teaches wherein when it is desired to form a film or membrane having a low degree of reflection, one or more of the following materials in dry power form ate used: ash, coal, soot, carbon black, graphite and other known forms of elementary carbon and other pigments such as ochre, bone, animal shells, marine shells, fish-scales, mineral pigments, plant dyes, plant pigments or algae-based components having dark characteristics (col. 3,lines 1-7,col. 5,lines 1-19). However,

Morgan is silent about the pigments are added in an amount of from 0.1 to 25 parts by weight, preferably from 0.1 to 10 parts by weight. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the pigments of Morgan be added in an amount of from 0.1 to 25 parts by weight, preferably from 0.1 to 10 parts by weight, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

For claim 20, Morgan teaches wherein the binders comprise organic glue and adhesive agents having a high protein content, preferably albumin glue, casein glue, animal glue, agar, alginic acid, ground acorn barnacles, latex and/or sap (col. 3,lines 40-67). However, Morgan is silent about the binders are added in an amount of from 0.1 to 15 parts by weight, preferably 0.1 to 5 parts by weight. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the binders of Morgan be added in an amount of from 0.1 to 15 parts by weight, preferably 0.1 to 5 parts by weight, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

For claim 22, Morgan teaches wherein the binders further comprise one or more fibres selected from the group consisting of cellulose fibre, plant fibre, textile fibre, animal fibre and reinforcing fibre (col. 2,lines 52-65,col. 3,lines 40-67). However, Morgan is silent about the fibre materials are added in an amount of from 0.5 to 30 parts by weight. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the fibre materials of Morgan be added in an amount of

from 0.5 to 30 parts by weight, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

For claim 24, Morgan teaches wherein the fertilizer agents comprise one or more fertilizers selected from the group consisting of animal manure, fish guano, guano, urea, inorganic nutrient salts and micronutrients (col. 3,lines 29-39). However, Morgan is silent about the fertilizer materials are added in an amount of from 0,1 to 20, preferably 0.1. to 15, and more preferably 0.1 to 5 parts by weight of dry powder. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the fertilizer materials of Morgan be added in an amount of from 0,1 to 20, preferably 0.1. to 15, and more preferably 0.1 to 5 parts by weight of dry powder, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

For claim 28, Morgan teaches wherein the water stabilizers comprise one or more substances selected from the group consisting of plant oils, mucilage, organic waxes and organic oils (col. 3,lines 51-52,col. 4,line 58). However, Morgan is silent about the water stabilizers are added in an amount of from 0.1 to 8.0, preferably from 0.1 to 25, and more preferably from 0.1 to 5 parts by weight of dry powder. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the water stabilizers of Morgan be added in an amount of from 0.1 to 8.0, preferably from 0.1 to 25, and more preferably from 0.1 to 5 parts by weight of dry powder, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

For claim 30, Morgan teaches wherein the pH regulators comprise one of more substances selected from the group consisting of sap, basic minerals, ash, and salts of the alkaline and alkaline earth metals (col. 3,lines 30-39). However, Morgan is silent about the pH regulator is added in an amount of from 0.1 to 50, preferably from 0.1 to 10. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the pH regulator of Morgan be added in an amount of from 0.1 to 50, preferably from 0.1 to 10, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

For claim 32, Morgan is silent about wherein the pH regulators are added in such quantity that the resulting membrane or film has a pH that is greater than 5, preferably in the range of pH 5 to 10. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the pH regulators of Morgan be added in such quantity that the resulting membrane or film has a pH that is greater than 5, preferably in the range of pH 5 to 10, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

12. **Claims 9,10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan as applied to claims 1,7,8 above, and further in view of Chiaffredo et al. (5441877).

For claim 9, Morgan is silent about wherein the vegetable debris is dried and ground seaweed, sea grass and/or kelp, and that 3 to 6 parts by weight thereof are used in the basic mixture.

Chiaffredo et al. teach in the same field of endeavor of soil mixture as Morgan in which Chiaffredo et al. employ seaweed in their mixture because seaweed is rich in organic matter for nutrients (col. 5,line 27). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ seaweed as taught by Chiaffredo et al. in the mixture of Morgan because seaweed is rich in nutrients which will enhance plant growth.

Morgan as modified by Chiaffredo et al. is silent about 3 to 6 parts by weight of seaweed is used in the basic mixture. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the seaweed of Morgan as modified by Chiaffredo et al. be added 3 to 6 parts by weight of seaweed is used in the basic mixture, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

For claim 10, Morgan as modified by Chiaffredo et al. is silent about employing sea grass preferably comprises the species Spartina and/or reeds, instead of seaweed. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ sea grass instead of the seaweed of Morgan as modified by Chiaffredo et al., depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

13. **Claims 11 & 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan as applied to claim 1 above, and further in view of Wallace et al. (4797145).

For claim 11, Morgan is silent about wherein the thickening agent is xanthan or xanthan gum, and that that the xanthan or xanthan gum is added in an amount of from 0.1 to 6 parts by weight.

Wallace et al. teach in the same field of endeavor of soil mixture as Morgan in which Wallace et al. employ xanthan gum in their mixture for thickening agent (col. 5,lines 5-15). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ xanthan gum as taught by Wallace et al. for the thickening agent in the mixture of Morgan, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

For claim 12, Morgan is silent about wherein the thickening agent is one or more alginates that are admixed and replace at least a part of the xanthan or xanthan gum, or that the one or more alginates replace all the xanthan or xanthaa gum.

In addition to the above, Wallace et al. also teach alginates admixed together or not with xanthan gum (col. 5,lines 5-15). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ alginates together with or without xanthan gum as taught by Wallace et al. for the thickening agent in the mixture of Morgan, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.